

Figure 1
The Player

Play

Stop

Forward

Reverse

Record

Figure 2
Player Function Keys

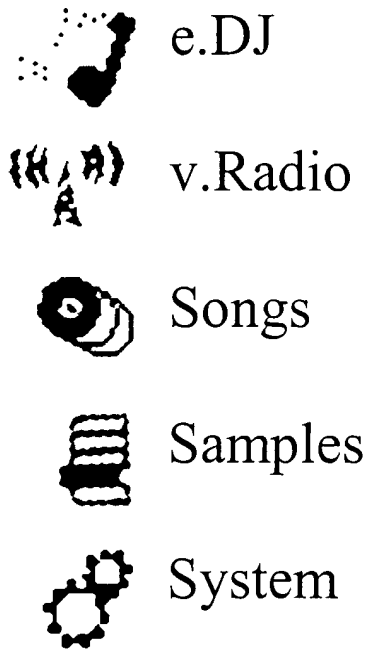


Figure 3
Mode/Direct Access Keys



Figure 4
Home Screen

2025 RELEASE UNDER E.O. 14176

press any key to return
PITCH/TEMPO:
Prefix for joystick:
Up-down: change
Pitch
Left-right: change
tempo

Figure 5
Help Screen



Figure 6
e.DJ Style Selection Screen



Figure 7
e.DJ I-Way Screen



Figure 8
e.DJ Underground Screen

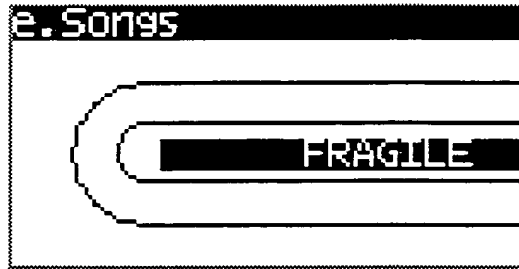


Figure 9
Play Song Screen

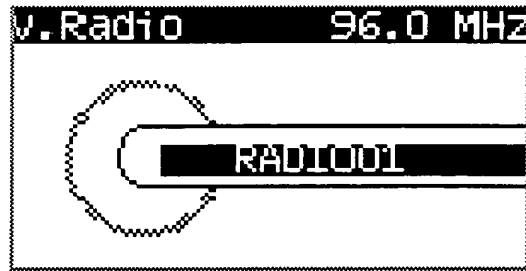


Figure 10
Play Radio Screen

New SONGLIST001

1	JINGLE
2	ALLNIGHT
3	FRAGILE
4	GROOVE
5	END LIST

Figure 11
List Edit Screen

Configuration

AUTOPLAY	Off
POWER OFF	Disabled
AUTOREPEAT	40 MS
EQ PRESETS	Default
STATION SEARCH	Auto
REC FORMAT	PCM

Figure 12
Configuration Screen

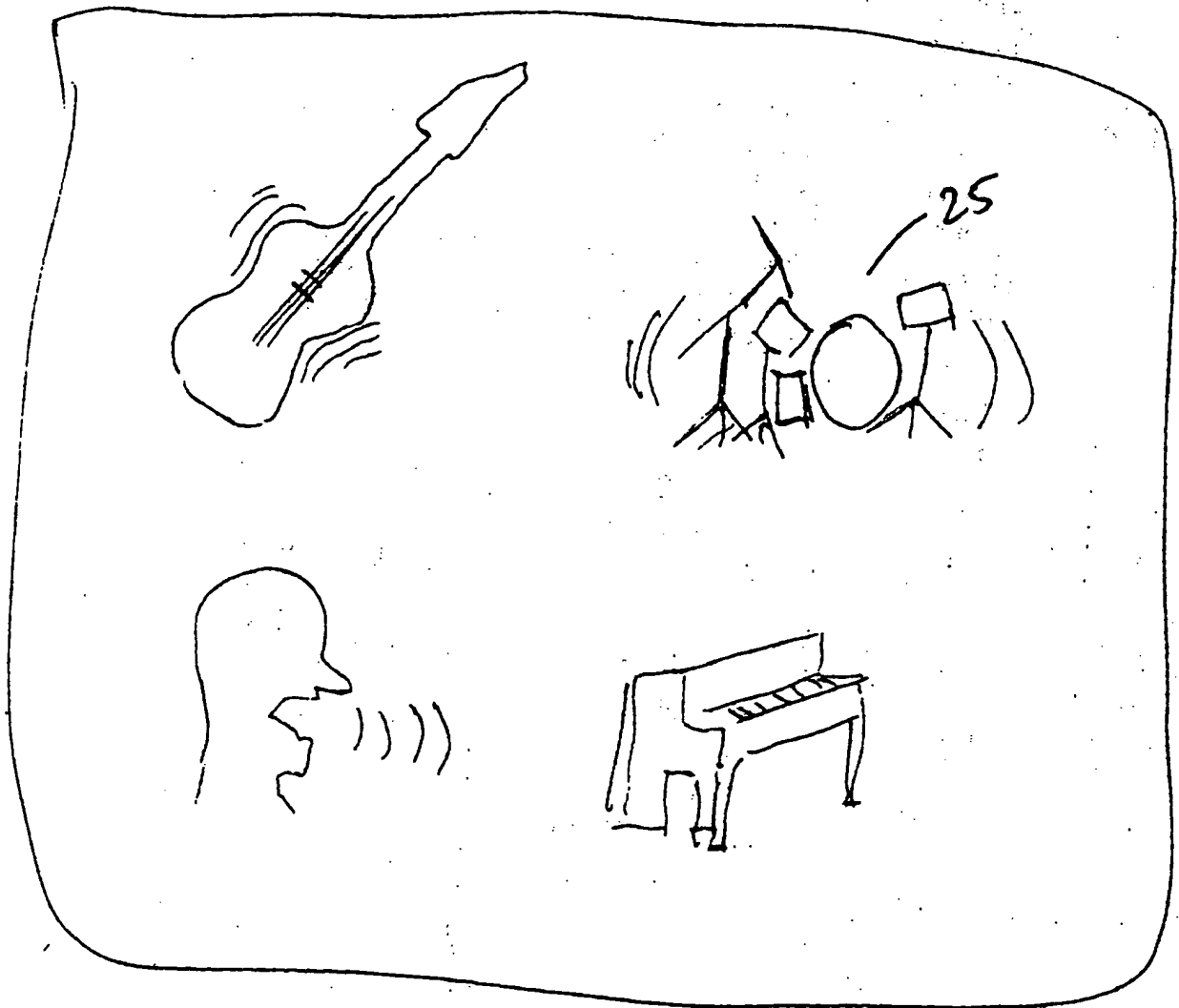


Figure 13
Alternative User Interface for I-Way Mode

Parameter	Values	Description
AutoPlay	On/Off	If AutoPlay is On, the MadPlayer automatically starts playing the first Play list contained on a SmartMedia card when inserted.
Power Off	Disabled, 1mn to 60mn in steps of 1mn.	Auto power off delay. The MadPlayer will power off automatically after this delay if no user action is detected.
AutoRepeat	40ms to 600ms in steps of 20ms	Keyboard auto-repeat delay in milliseconds. Delay before repeating the corresponding action when a key is pressed continuously.
EQ Preset	Factory Woof Hitek Flat User	Presets for 4-band equalizer. Factory, Woof, HiTek and Flat are factory presets and fixed. User preset can be configured by the User via the System-Equalizer menu.
Mic State	On/Off	Microphone input is On or Off.
Mic Volume	0 to 31	Microphone volume.
Echo Level	0 to 127	Level of echo applied to microphone input
Echo Time	0 to 127	Microphone echo delay. 0 shortest, 127 longest.
Echo Feedbk	0 to 31	Echo feedback: 0 minimum feedback, 127 maximum feedback.
Rec Format	PCM HQFADPC M	Format used to store recorded samples: PCM: PCM, 16bits mono, 19.31kHz HQFADPCM: High Quality ADPCM
Language	English Francais Espanol	Language used for the menus.
Sort Files	By Name By Type	Criterion used to sort files when displaying a list: by name (alphabetically) or by type (songs, samples, lists...).
Sort Presets	By Name By Freq	Criterion used to sort radio presets: by name (alphabetically) or by frequency.
Product	String	Read Only. Hardware version
Release	String	Read Only. Firmware version

Figure 14
Configuration Parameters

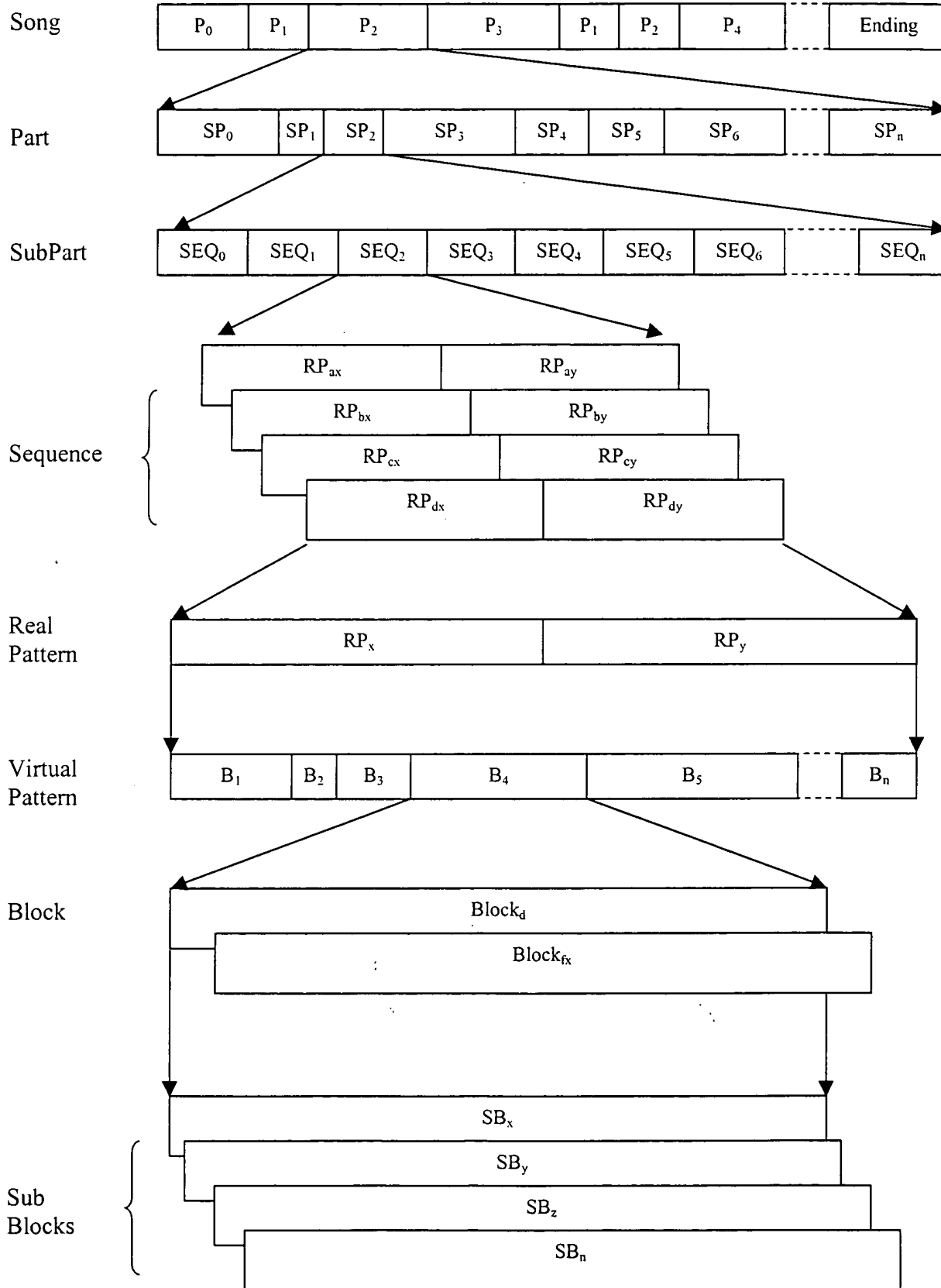


Figure 15 Song Structure

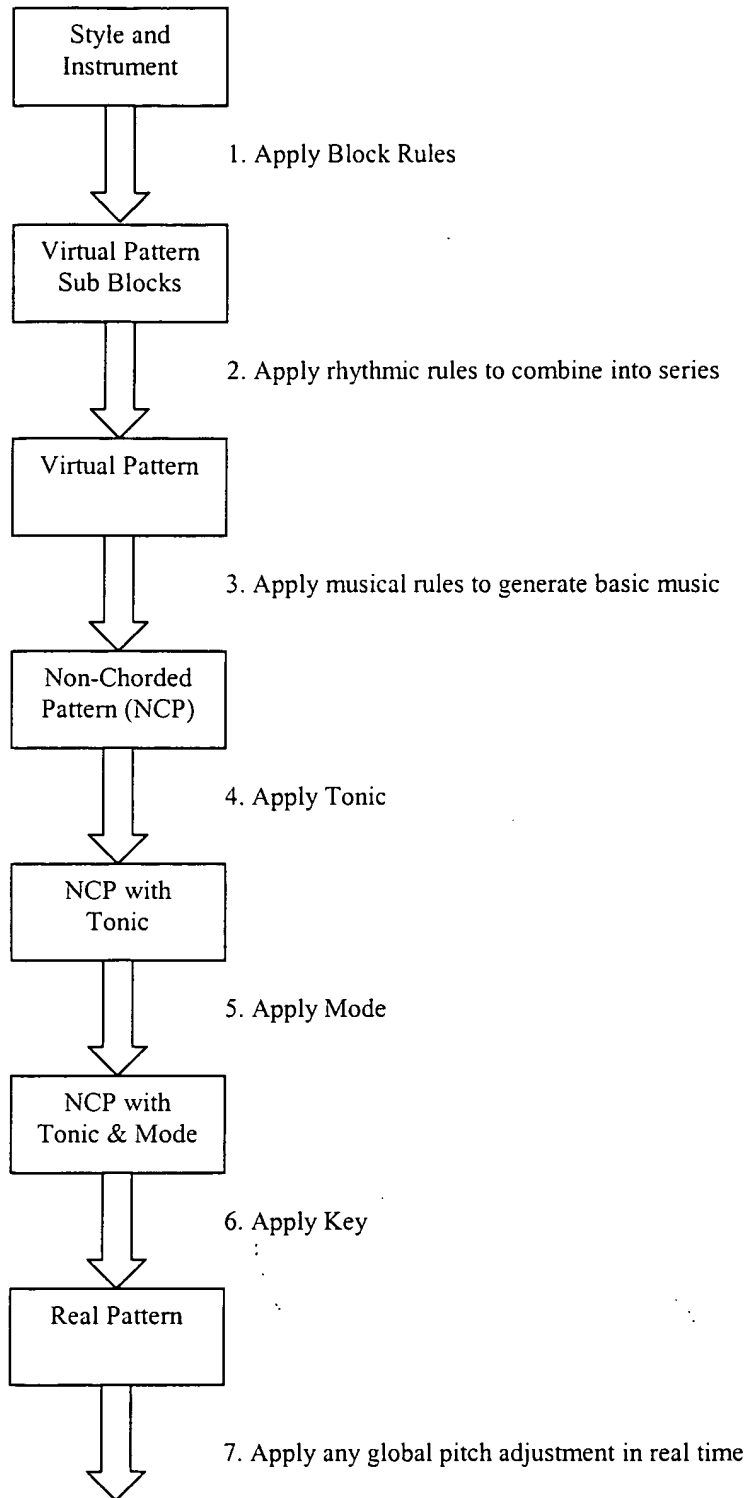


Figure 16
General Musical Generation Flow

<i>Hexadecimal Value</i>	<i>Internal Nomenclature</i>	<i>Potential Values</i>
40	Base Note	C, E, G, B
41	Magic Note 1	+1, -1, +2, -2
42	Magic Note 0	+1, -1, +2, -2, 0
43	High Note	+7
44	Last Note	C, G
45	One Before Last Note	E, G, B
46	ALC Controller <ul style="list-style-type: none"> • Harmonic Note • Fixed Note 	0, +2, +4, +6, -3, -5, -7 any

Figure 17
Examples of Virtual Notes/Controllers

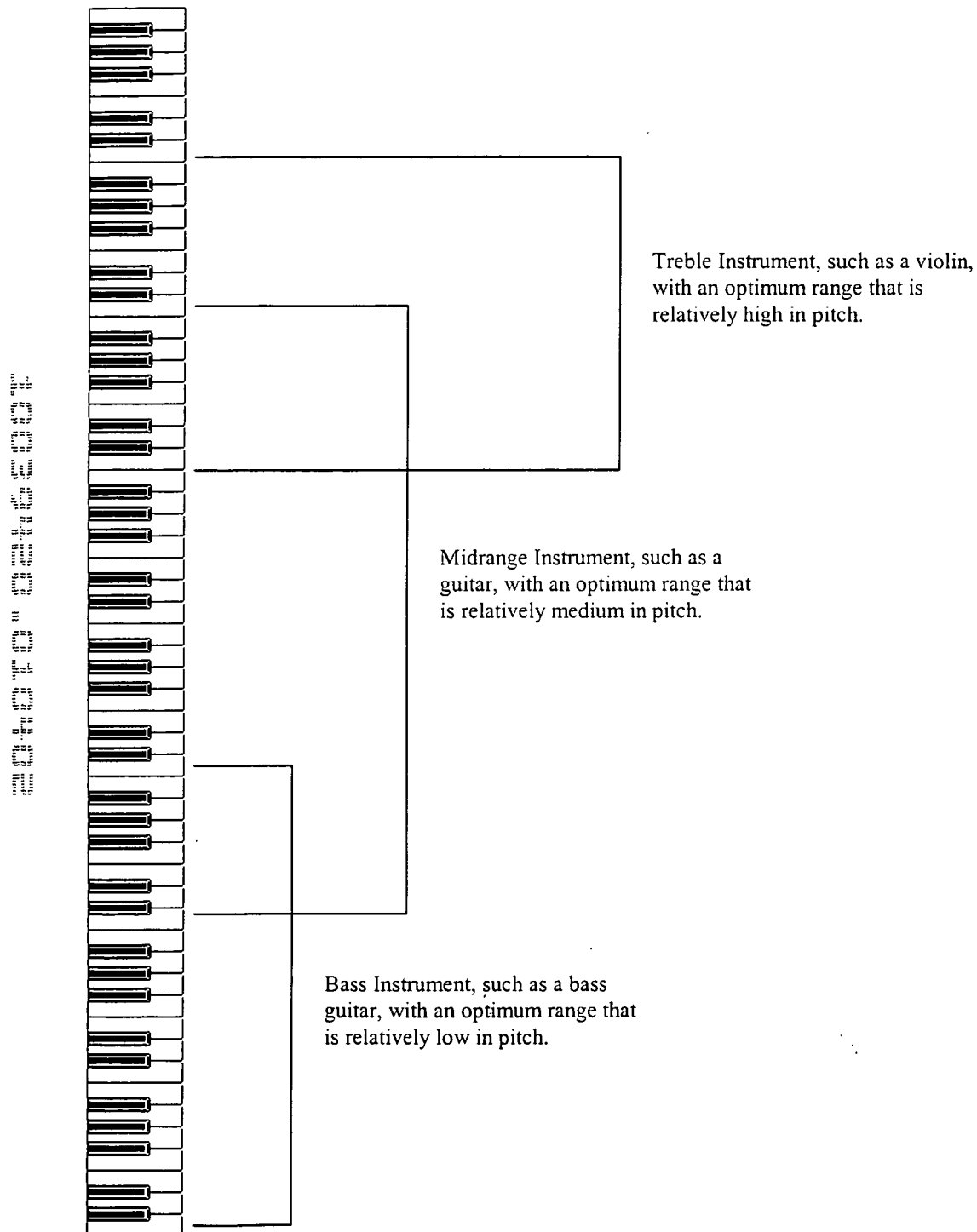


Figure 18 Example of Tessitura

	Key			
Chord	A	C	D	G
Offset	-3	0	+2	+8

Figure 19

Mode Type	Individual Notes											
All Notes	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
Natural	C	C	D	D	E	F	F	G	G	A	A	B
Lydian Descending	C	C	D	D	E	E	F#	G	G	A	A	B
Lydian Ascending	C	D	D	E	E	F#	F#	G	A	A	A	B

Figure 20






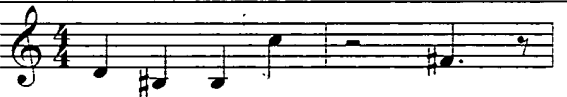
	Musical Notation	Software Notation (QN=30)
Virtual Pattern Sub-Blocks		C4 = Base Note F#4 = Magic Note Type 1 D4 = Magic Note Type 0 C#4 = High Note C4 = Base Note
Virtual Pattern (VP)		00 91 30 70 1e 81 30 00 91 36 64 1e 81 36 00 91 32 7f 1e 81 32 00 91 31 72 1e 81 31 3C 91 30 64 2d 81 30
Non-Chorded Pattern (NCP)		00 91 34 70 1e 81 34 00 91 32 64 1e 81 32 00 91 32 7f 1e 81 32 00 91 3e 72 1e 81 3e 3C 91 37 64 2d 81 37
NCP with Tonic (PwT)		00 91 31 70 1e 81 31 00 91 2f 64 1e 81 2f 00 91 2f 7f 1e 81 2f 00 91 3b 72 1e 81 3b 3C 91 34 64 2d 81 34
PwT with Mode (PwTM)		00 91 30 70 1e 81 30 00 91 2f 64 1e 81 2f 00 91 2f 7f 1e 81 2f 00 91 3b 72 1e 81 3b 3C 91 34 64 2d 81 34
Real Pattern (RP)		00 91 32 70 1e 81 32 00 91 31 64 1e 81 31 00 91 31 7f 1e 81 31 00 91 3d 72 1e 81 3d 3C 91 36 64 2d 81 36

Figure 21
Example of VP-to-RP Flow

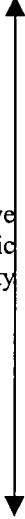
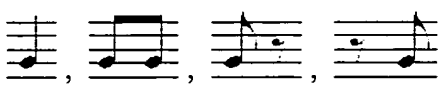

	Rhythmic Blocks/Sub-Blocks	Conditions
Relative Rhythmic Density 		All variations, given: <ul style="list-style-type: none"> • eighth note is smallest unit • length of 1 quarter note • all full rests are indicated separately as 'empty'
		All variations, given: <ul style="list-style-type: none"> • eighth note is smallest unit • length of 2 quarter notes • does not include 1 quarter note variations above

Figure 22
Rhythmic Variations based on Duration

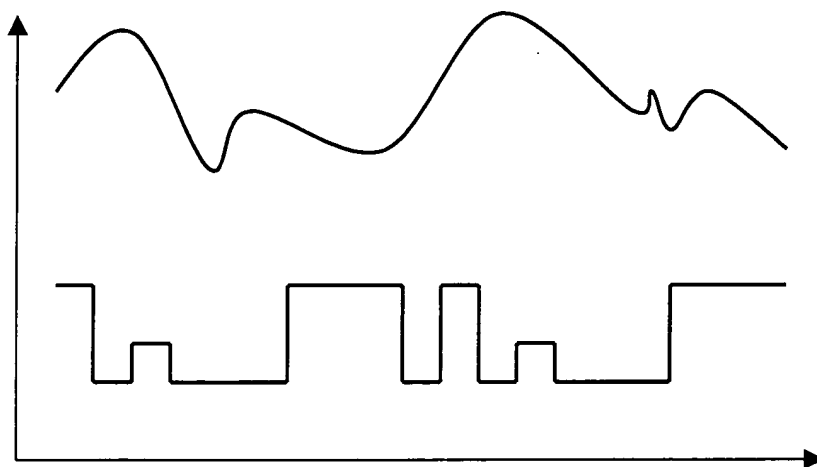


Figure 23
Relative Mobility of Note Pitch

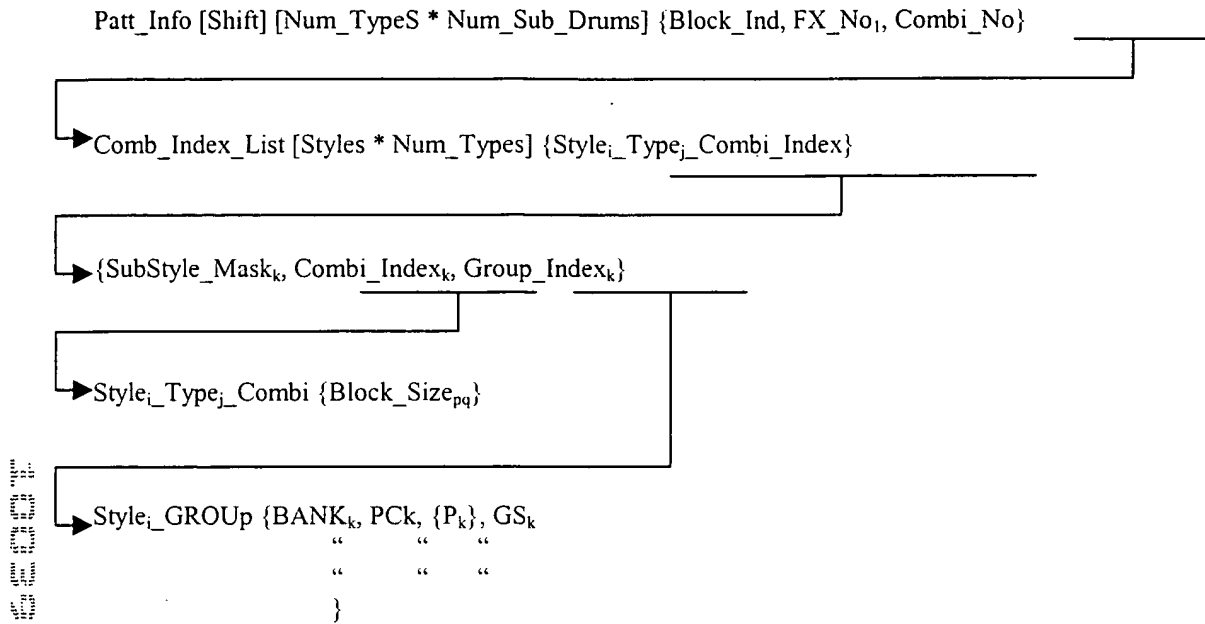


Figure 24
Pattern Structure Creation Example

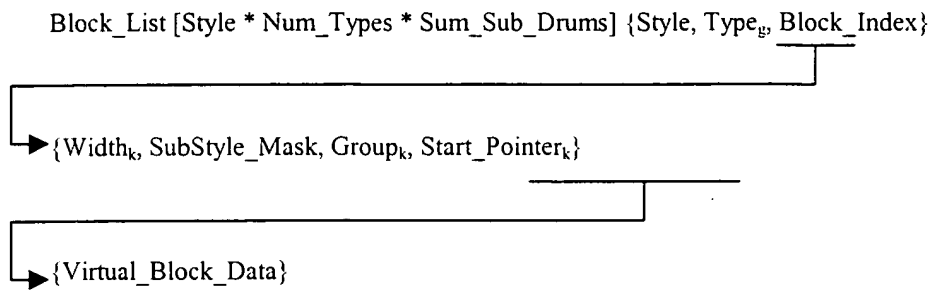


Figure 25
Block Structure Creation Example

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

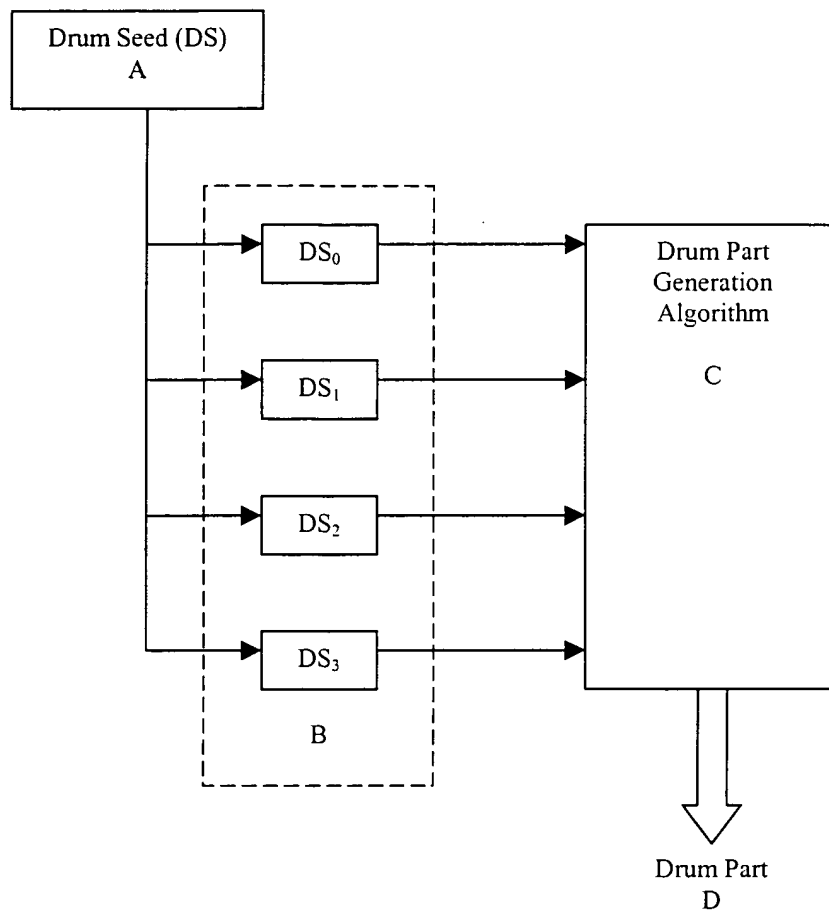


Figure 26
Pseudo-Random Number Implementation 1

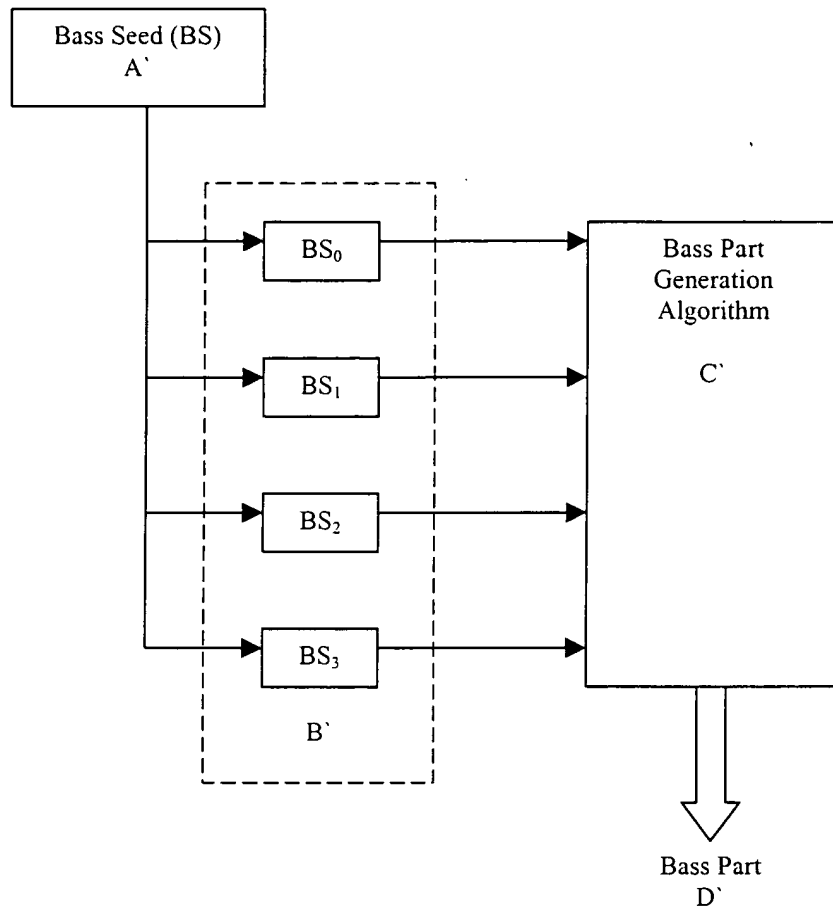


Figure 27
Pseudo-Random Number Implementation 2

Application Revision	Firmware/application version used to generate the data structure
Style, SubStyle	The style and/or substyle
Sound Bank, Synth Type	The sound bank/synth type
Sample Frequency	How often a sample is played in song
Sample List	List of samples associated with the Style
Key	First Key used, pitch offset
Tempo	Start Tempo (e.g., in pulses per quarter note)
Instrument	Identification of a particular instrument in an instrument group. Indexed by type of instrument
State	State of instrument indexed by instrument type (e.g., muted, unmuted, normal, Forced play, solo, etc.)
Parameter	Instrument parameters indexed by instrument type (e.g., volume, pan, timbre, etc.)
PRNG Seed Values	Seed values used to initialize the PRNG routines

Figure 28
Simple Data Structures

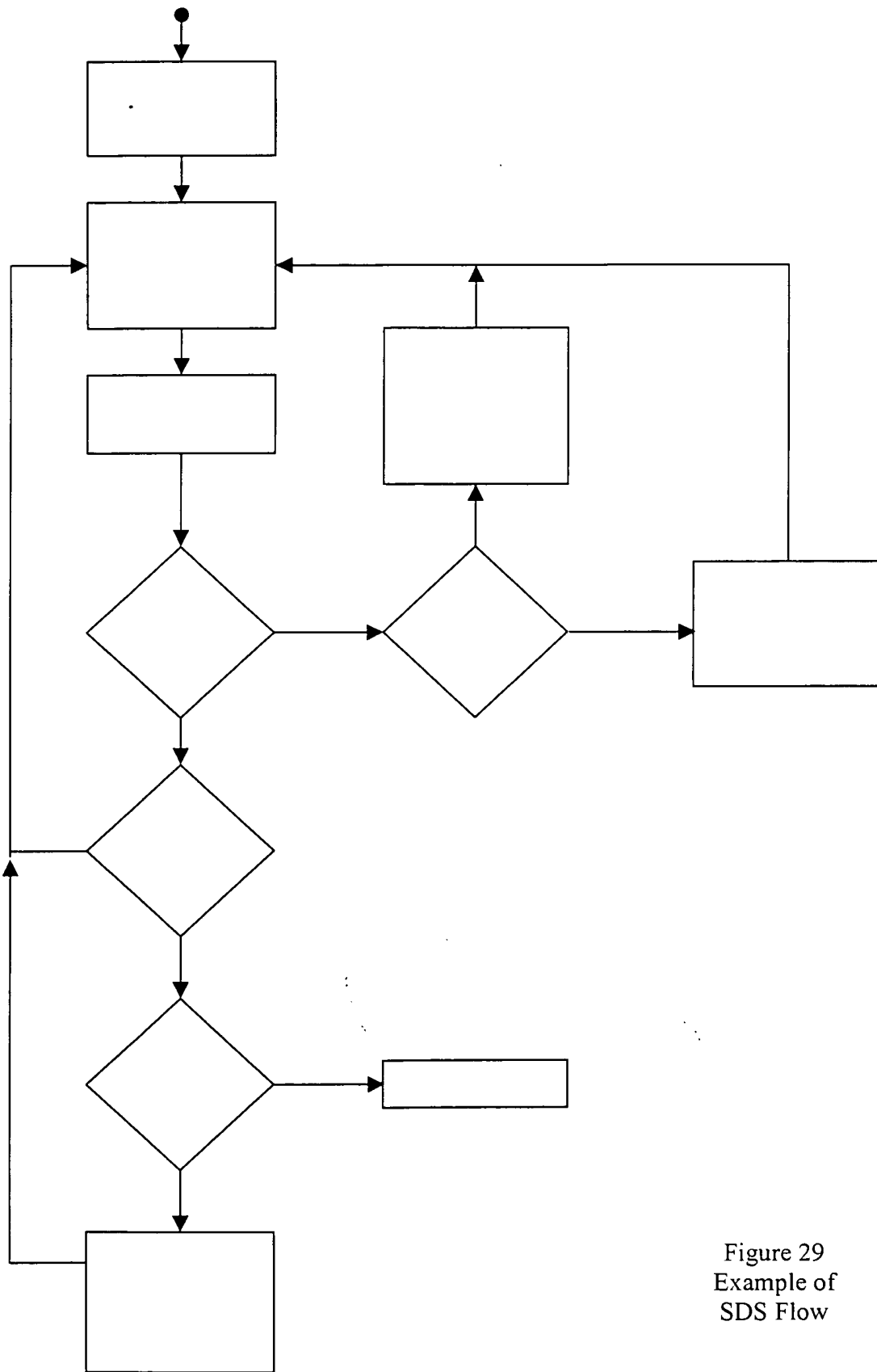


Figure 29
Example of
SDS Flow

Application Revision	Firmware/application version used to generate the data structure
Style, SubStyle	The style and/or substyle
Sound Bank, Synth Type	The sound bank/synth type
Sample Frequency	How often a sample is played in song
Sample List	List of samples associated with the Style
Key	First Key used, pitch offset
Tempo	Start Tempo (e.g., in pulses per quarter note)
Song Structure	Number of types, number of parts, sequence of parts, etc.
Structure	For every part: number of sub-parts, sequence of sub-parts, etc. Indexed by Part
Filtered Track	Type, function (e.g., sawtooth wave, sine wave, square wave, etc.), initial value, etc., of an effect. Indexed by Part.
Progression	Time signature, number of SEQs, list of maked types, etc. Indexed by Sub-Part.
Chord	Time stamp, chord vector, key note, progression mode, etc. Indexed by Sub-Part.
Pattern	Combination (Instrument), block data, effects data, etc. Indexed by Type.
Combination	List of instruments. Sub-set of 'Pattern' above.
FX Pattern	Effects data. Sub-set of 'Pattern' above.
Blocks	Block data. Subset of 'Pattern' above.
Instrument	Identification of a particular instrument in an instrument group. Indexed by type of instrument
State	State of instrument indexed by instrument type (e.g., muted, unmuted, normal, Forced play, solo, etc.)
Parameter	Instrument parameters indexed by instrument type (e.g., volume, param1, param2, etc.)
Nota Bene	Improvisation data (e.g., certain instruments or notes) that might be different each time the song is played.

Figure 30
Complex Data Structures

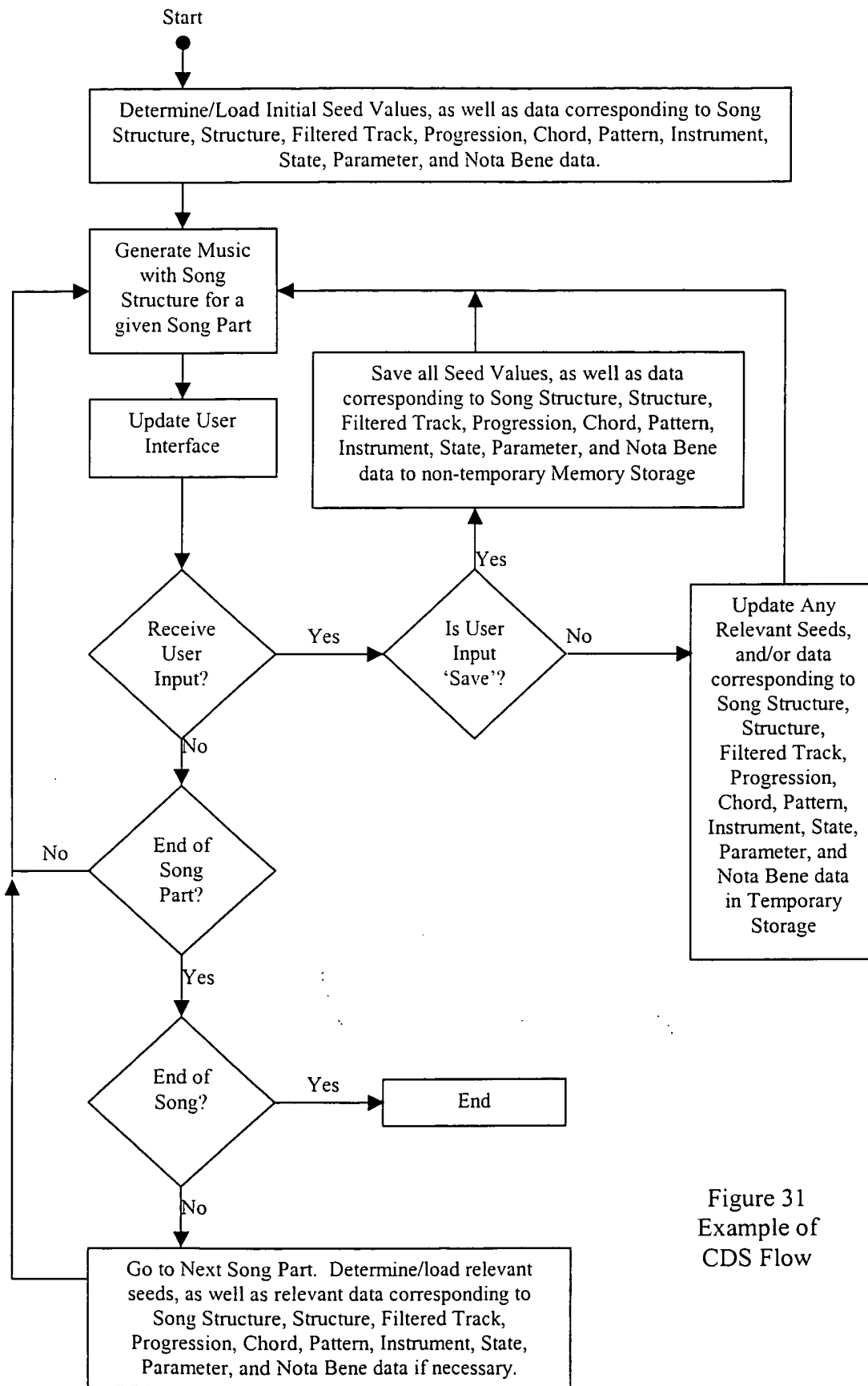


Figure 31
Example of
CDS Flow

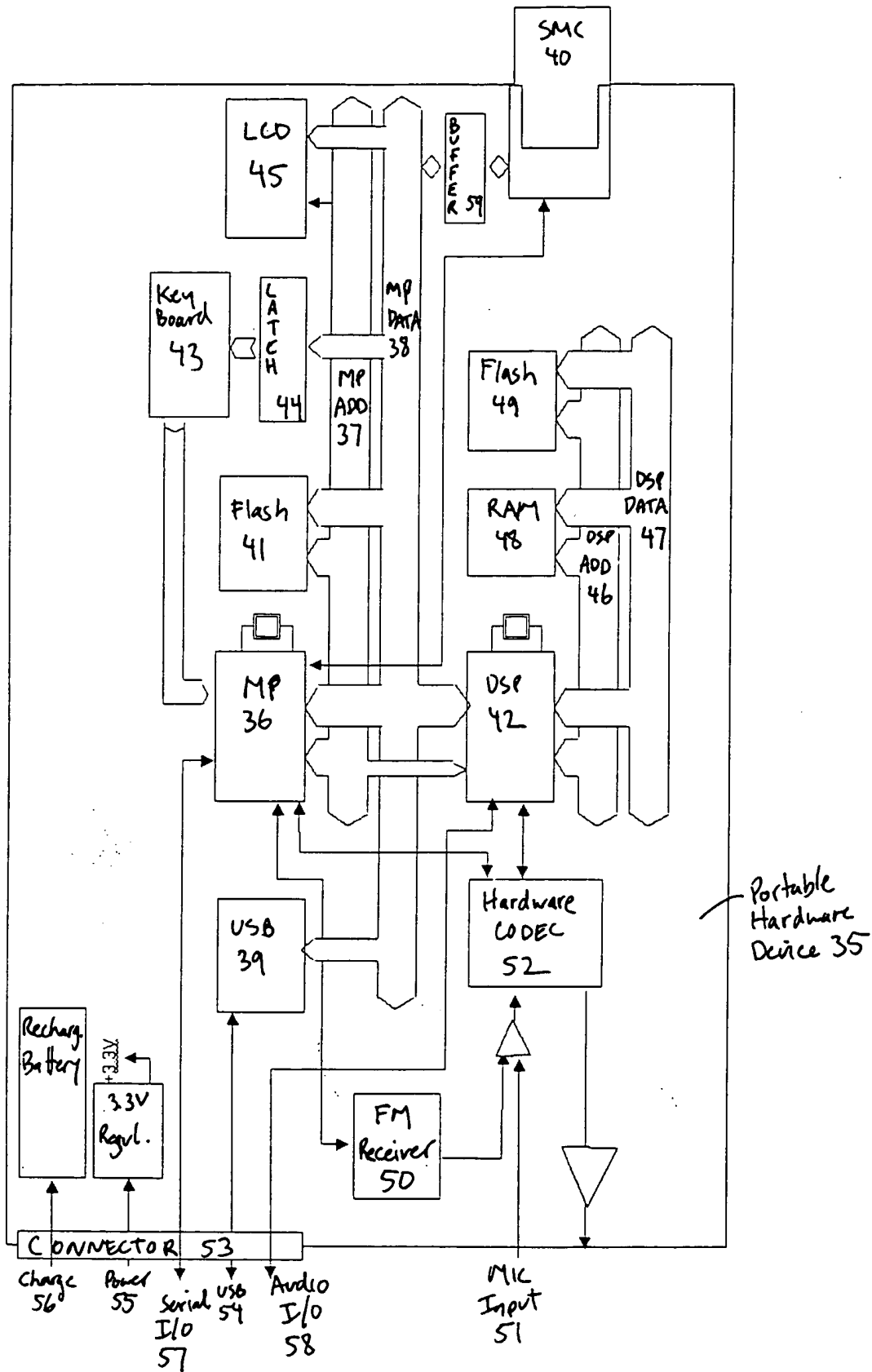


Figure 32

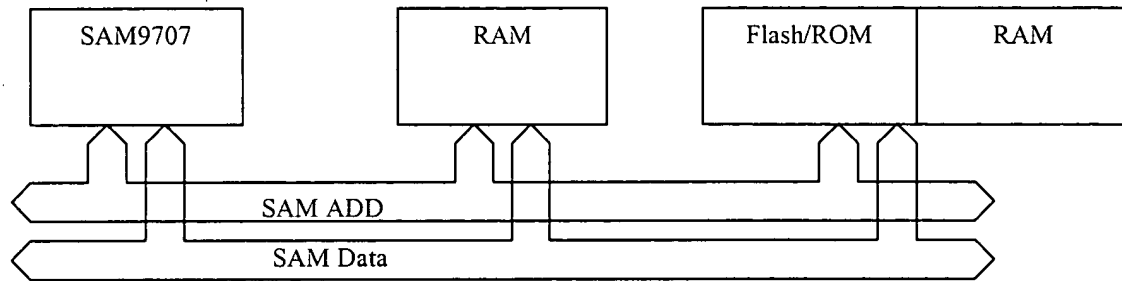


Figure 33
Additional Variation

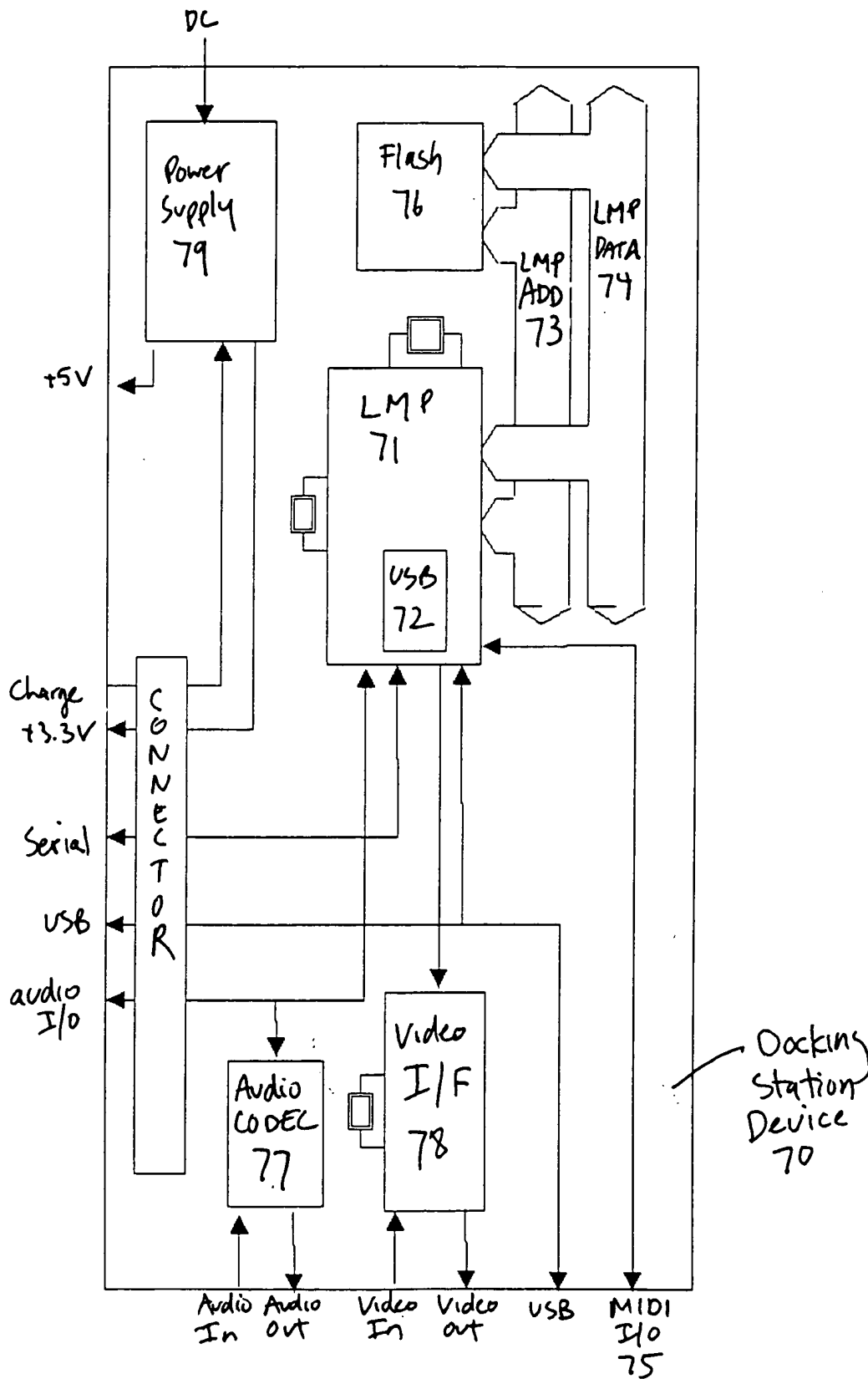


Figure 34

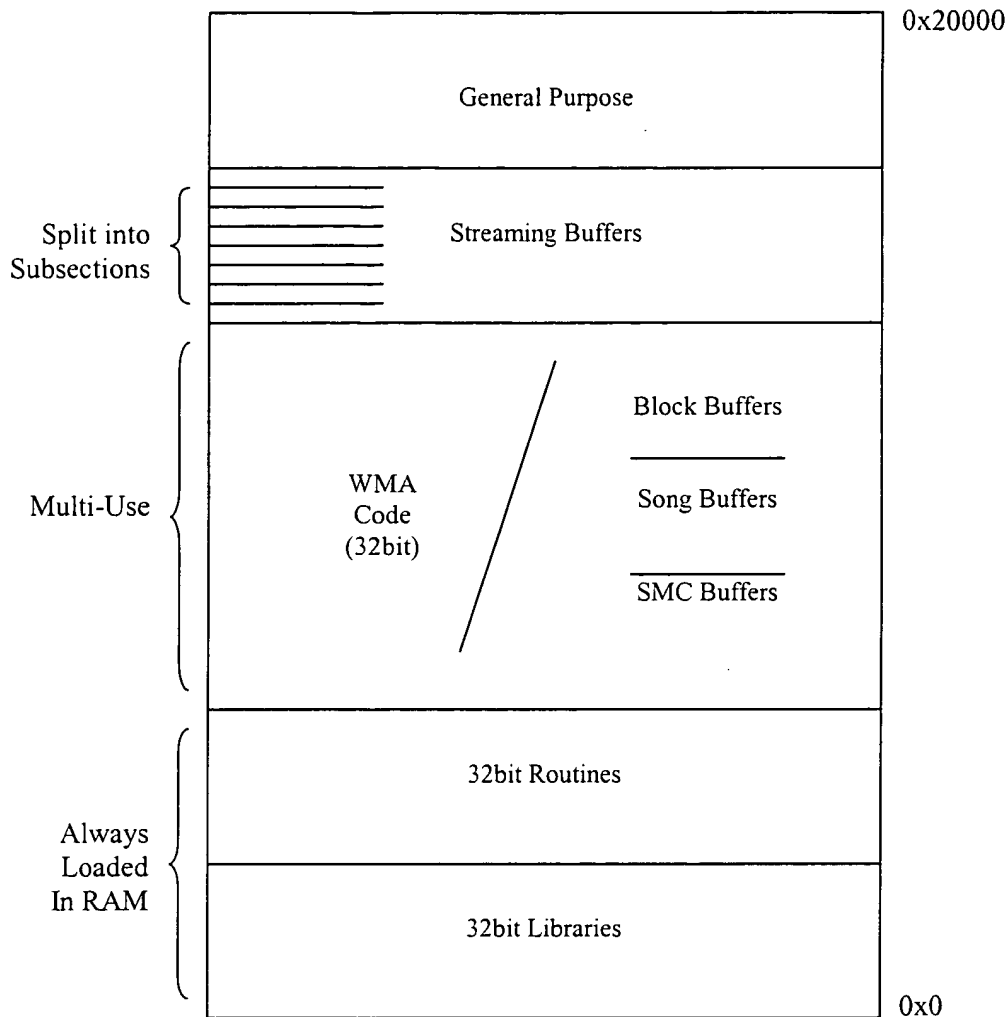


Figure 35
Address Map for MP RAM

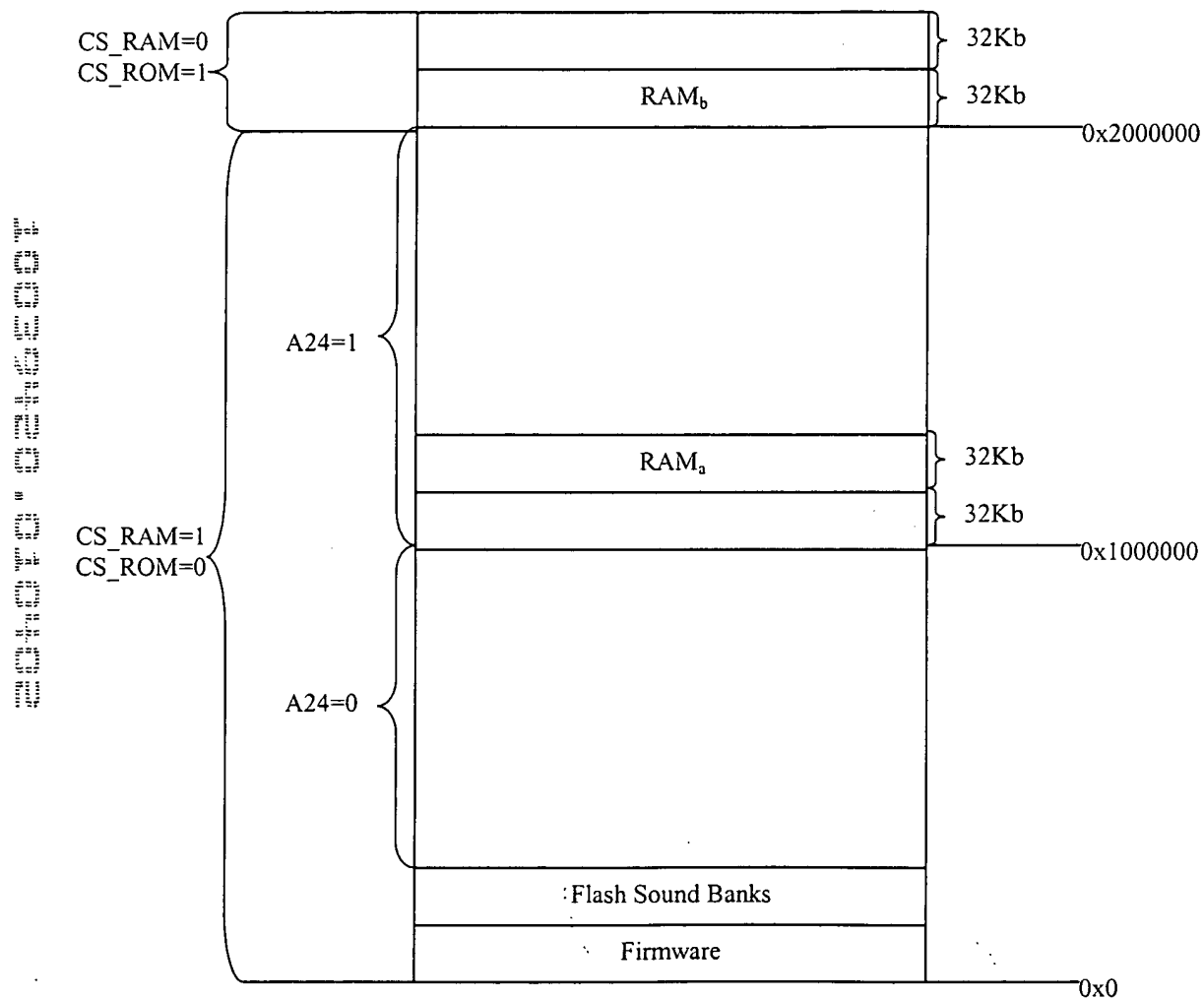


Figure 36
DSP-Local RAM/Flash Address Space

		BOOT	
		0	1
A24	0	Flash	RAM
	1	RAM	Flash

Figure 37
Bootstrap Mode Addressing

Figure 38 is a schematic diagram of a grid structure. The grid is composed of 12 columns and 10 rows. The first two columns are labeled 'A' and 'B' respectively. The first two rows are labeled '1' and '2' respectively. The grid is divided into four quadrants by a vertical line between columns 6 and 7 and a horizontal line between rows 5 and 6. The top-left quadrant (columns 1-6, rows 1-5) is labeled 'A1'. The top-right quadrant (columns 7-12, rows 1-5) is labeled 'B1'. The bottom-left quadrant (columns 1-6, rows 6-10) is labeled 'A2'. The bottom-right quadrant (columns 7-12, rows 6-10) is labeled 'B2'. The grid is further divided into smaller sub-grids by additional vertical and horizontal lines. The grid is shown with a perspective view, with lines indicating the depth of the structure.

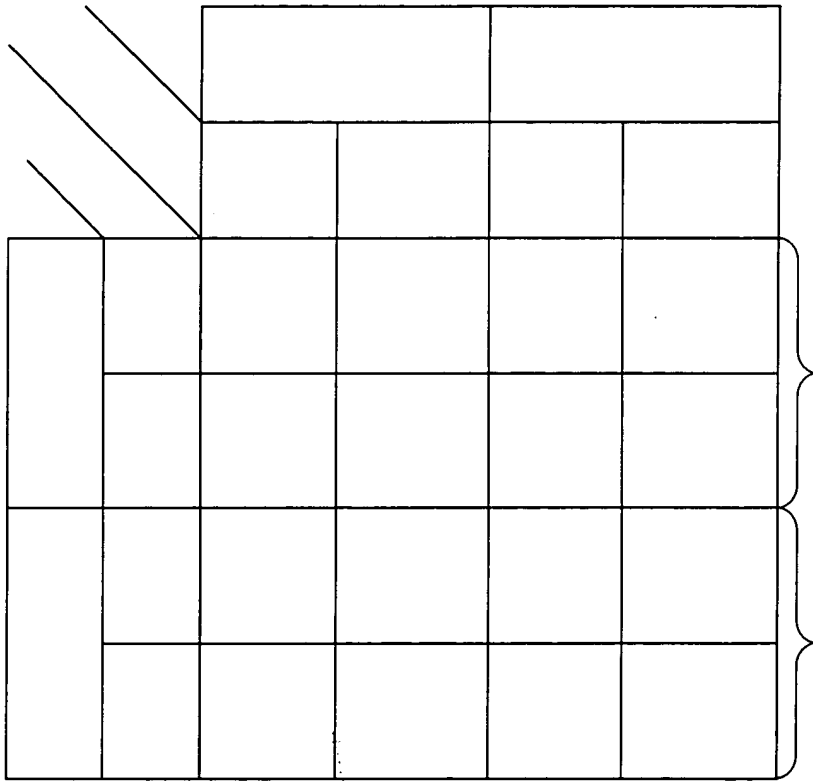


Figure 38

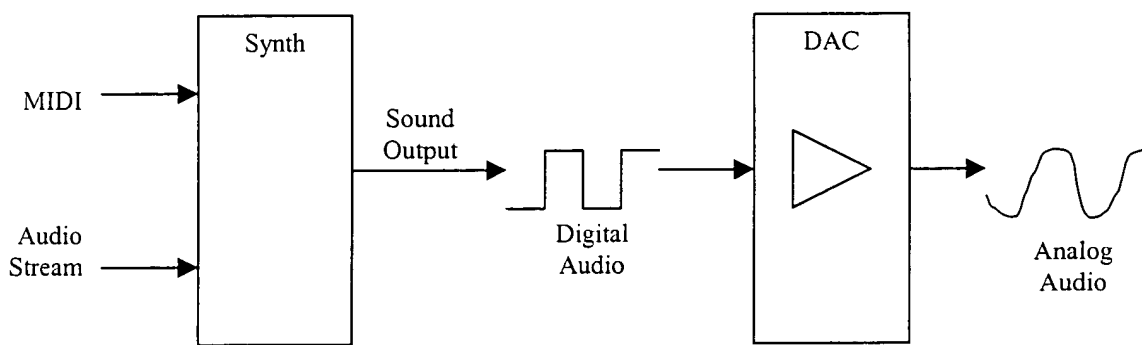


Figure 39
MIDI/Audio Stream

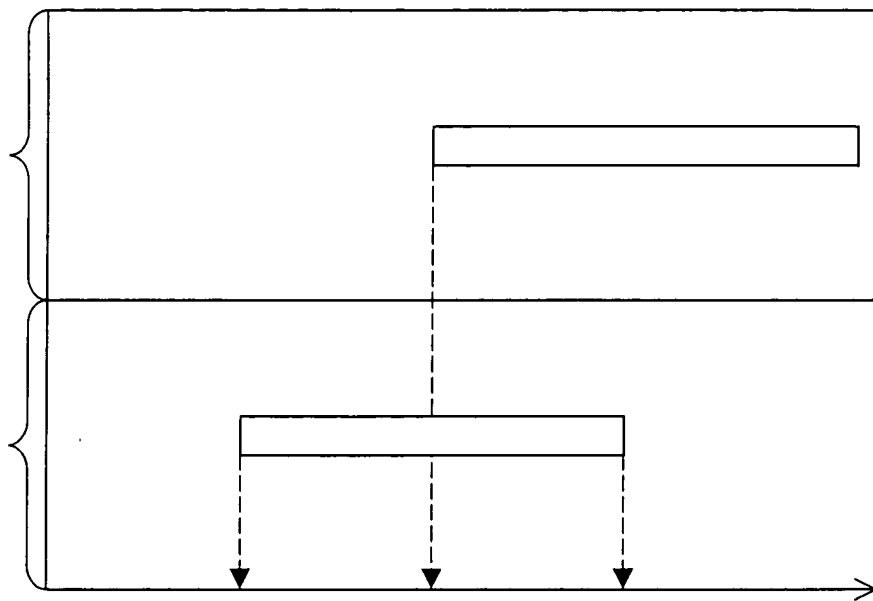


Figure 40
Simplified MIDI/Audio Stream Timeline

	NRPN Stream (Hexadecimal)	Indication/Meaning
1	B0	Channel Number
2	63	NRPN Controller A (e.g., audio sample type)
3	40	Identification of sample type (e.g., long, short, stereo, mono, etc.)
4	00	Delta time
5	62	NRPN Controller B (e.g., audio effects type)
6	00	Identification of effects type (ping pong, ripple, phaser, distortion, etc.)
7	00	Delta time
8	06	Identification of register for NRPN Controller A value
9	03	NRPN Controller A value (play 3 rd audio sample in set, '00' is random)
10	00	Delta time
11	26	Identification of register for NRPN Controller B value
12	07	NRPN Controller B value (apply audio effect #7, '00' is random)

Figure 41
Simplified NRPN Example

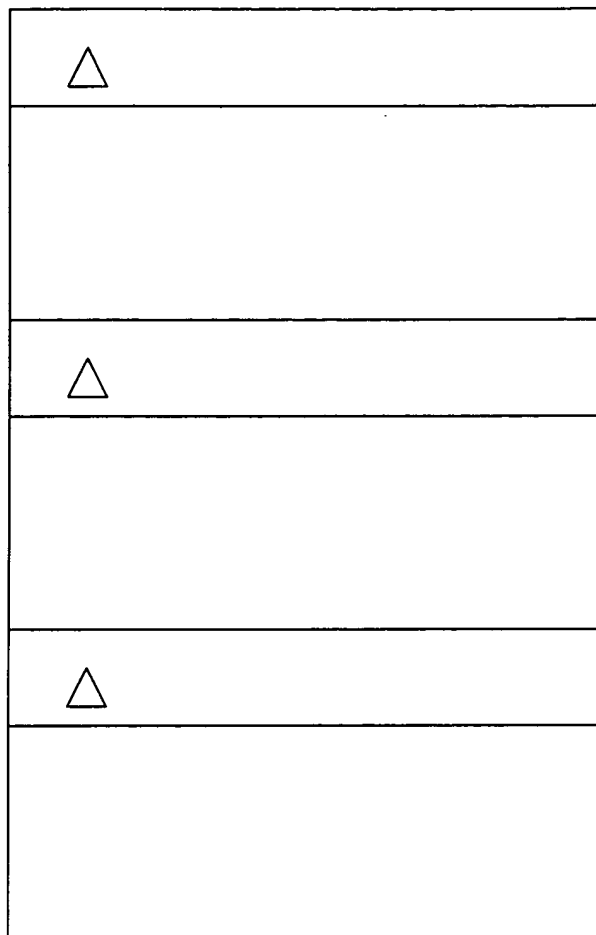


Figure 42
Simplified Special MIDI Type File